Smart Civic Watch

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Introduction / Background

- This project looks at developing a real-time public incident reporting and alert system.
- The system allows citizens to report various types of public incidents such as garbage issues, crimes, fires, medical emergencies and much more.

Problem Statement

- Many communities face delays in addressing public issues due to ineffective reporting systems.
- Resolutions to problems are unlikely to be carried out as authorities are reluctant hoping people will move on.

- - Health hazards and security risks escalate
- - Citizens lack awareness of unsafe zones

Project Objectives

- To develop a real-time mobile and web-based system for public incident reporting and alerting.

Which will have the following specific objectives:

- To allow incident reporting with minimal input and media
- To provide Real-time alerts and incident maps
- Area tracking, response-timers, and rewards

Proposed System / Solution

- A mobile app for public users and a web dashboard for the authorities.

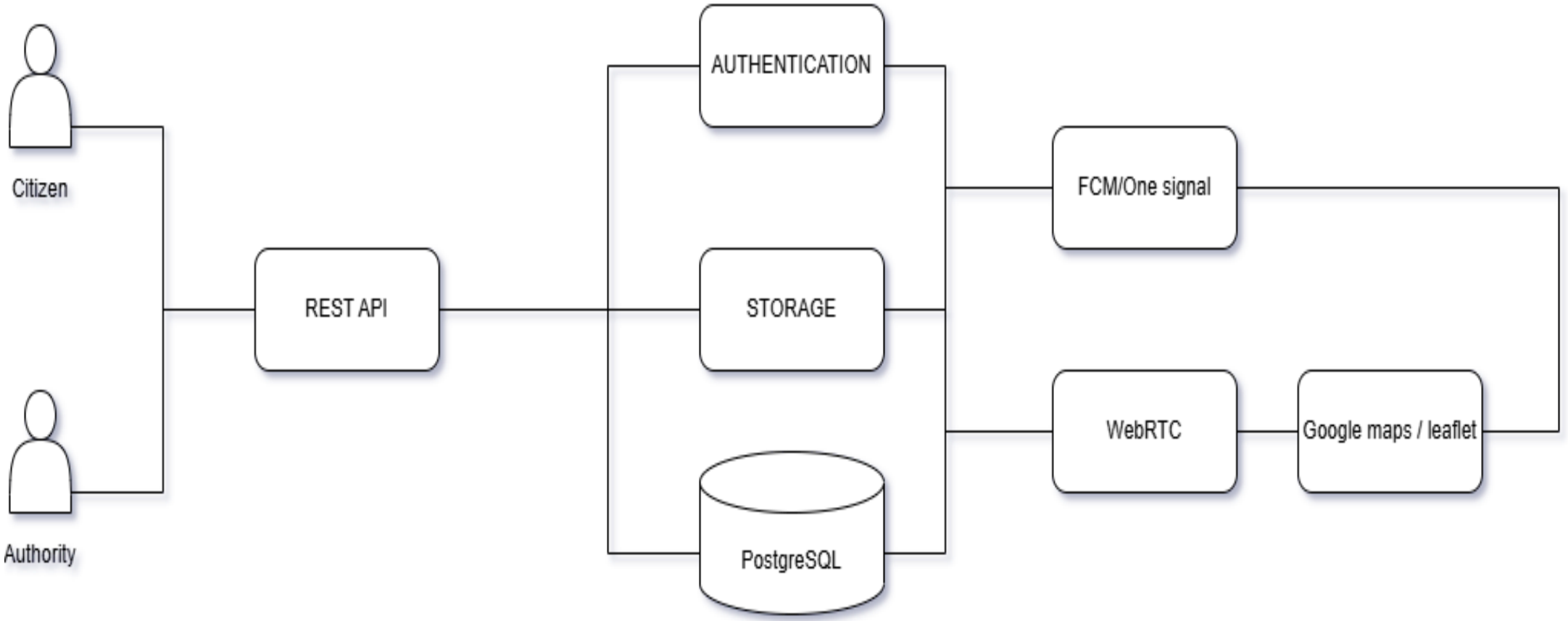
Key Features:

- Real-time reporting with photos, location & video
- Alerts for emergencies and local threats
- Incident history per area/route
- Timers with check marks showing resolution duration
- Allow Donations and user rewards

Tech stack

- Frontend (Mobile): Flutter / React Native
- Frontend (Web): React.js
- Backend: Node.js / Django
- Database: PostgreSQL
- Streaming: WebRTC
- Authentication: Firebase Auth / Auth0
- Notifications: FCM / OneSignal
- Maps: Google Maps API / Leaflet
- Payments: Stripe / PayPal / Flutterwave

System Architecture



Scope & Deliverables

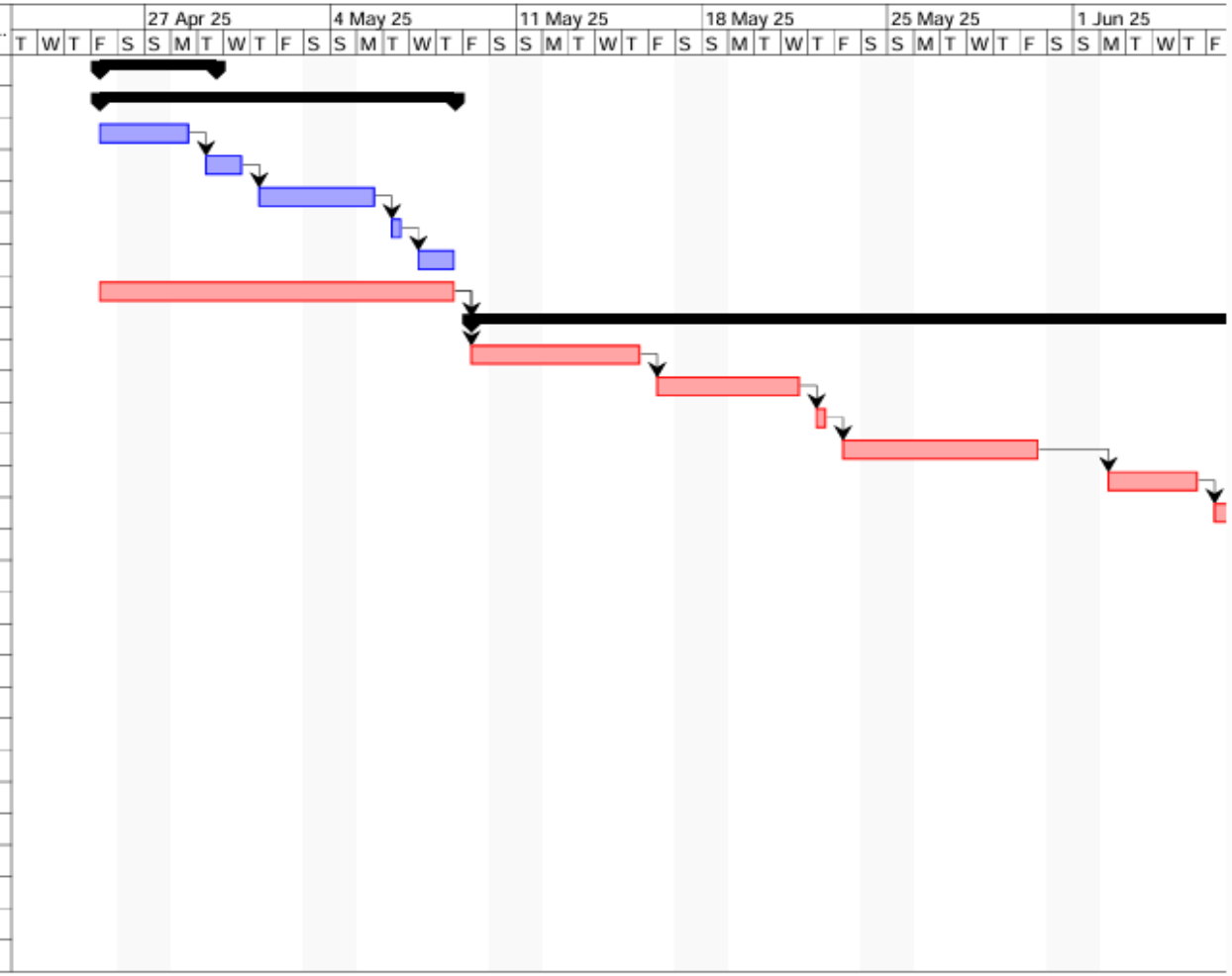
- In-Scope:
- - Mobile app and an admin dashboard
- - Real-time alerts, media uploads, area trends
- - Donation and reward system

- Out-of-Scope:
- - Full-scale deployment

- A **working prototype** that demonstrates the reporting system, real-time alerts, and feedback loop will be delivered.

Project Timeline / Work Plan

		Name	Duration	Start	Finish	Pre...	R...
1		**Planning & Research**	**3 days**	**4/25/25 8:00 AM**	**4/29/25 5:00 PM**		
6		**UI/UX Design**	**10 days**	**4/25/25 8:00 AM**	**5/8/25 5:00 PM**		
7		Create low-fidelity wireframes for mobile and web	2 days	4/25/25 8:00 AM	4/28/25 5:00 PM		
8		Design high-fidelity mockups	2 days	4/29/25 8:00 AM	4/30/25 5:00 PM	7	
9		Map out user journeys and flows	3 days	5/1/25 8:00 AM	5/5/25 5:00 PM	8	
10		Collect feedback and revise design	1 day	5/6/25 8:00 AM	5/6/25 5:00 PM	9	
11		Prepare assets: icons, colors, layout guides	2 days	5/7/25 8:00 AM	5/8/25 5:00 PM	10	
12		Mobile App Development	10 days	4/25/25 8:00 AM	5/8/25 5:00 PM		
13		**Admin Dashboard & Backend Development**	**22 days?**	**5/9/25 8:00 AM**	**6/9/25 5:00 PM**	**12**	
14		Set up backend	5 days	5/9/25 8:00 AM	5/15/25 5:00 PM	12	
15		Develop APIs for report submission, user roles, alerts	4 days	5/16/25 8:00 AM	5/21/25 5:00 PM	14	
16		Implement login/auth for admins	1 day?	5/22/25 8:00 AM	5/22/25 5:00 PM	15	
17		Build web dashboard to display reports in real time	6 days	5/23/25 8:00 AM	5/30/25 5:00 PM	16	
18		Integrate map view and incident filters	4 days	6/2/25 8:00 AM	6/5/25 5:00 PM	17	
19		Add ability to assign responders and update statuses	2 days	6/6/25 8:00 AM	6/9/25 5:00 PM	18	
20		**Integration & Testing**	**16 days**	**6/10/25 8:00 AM**	**7/1/25 5:00 PM**	**19**	
21		Connect mobile and web frontend to backend APIs	3 days	6/10/25 8:00 AM	6/12/25 5:00 PM	19	
22		Integrate notifications (FCM / OneSignal)	2 days	6/13/25 8:00 AM	6/16/25 5:00 PM	21	
23		Ensure media uploads work end-to-end	2 days	6/17/25 8:00 AM	6/18/25 5:00 PM	22	
24		Test response timers and feedback updates	1 day	6/19/25 8:00 AM	6/19/25 5:00 PM	23	
25		Conduct unit, integration, and user testing	3 days	6/20/25 8:00 AM	6/24/25 5:00 PM	24	
26		Fix major bugs and polish UI/UX	5 days	6/25/25 8:00 AM	7/1/25 5:00 PM	25	
27		**Documentation & Final Report**	**10 days**	**6/25/25 8:00 AM**	**7/8/25 5:00 PM**	**25**	
28		Write user manual and developer documentation	1 day	6/25/25 8:00 AM	6/25/25 5:00 PM	25	
29		Document API endpoints, architecture, and features	2 days	6/26/25 8:00 AM	6/27/25 5:00 PM	28	
30		Prepare final report with screenshots and diagrams	3 days	6/30/25 8:00 AM	7/2/25 5:00 PM	29	
31		Create presentation slide deck	1 day	7/3/25 8:00 AM	7/3/25 5:00 PM	30	
32		Run demo and get feedback	1 day	7/4/25 8:00 AM	7/4/25 5:00 PM	31	
33		Submit source code, report, and presentation	2 days	7/7/25 8:00 AM	7/8/25 5:00 PM	32	



Expected Challenges

- Challenge: Live streaming integration
- Solution: Use third-party APIs

- Challenge: GPS accuracy
- Solution: Fallback options

- Challenge: Balancing anonymity & trust
- Solution: Support both modes

Conclusion

- Smart Civic Watch will improve the quality of life through better incident response and citizen engagement.

- As it bridges the gap between the public and authorities, enhancing safety, and promoting transparency.

Thank You / Q&A

- I appreciate your time and are there any questions.